What is claimed is:

1. A method to conduct an information survey, the method including:
transforming a survey niche using a computing system to produce a transformed survey niche; and
identifying at least one characterized partition of entities in the transformed survey niche, using the computing system.

2. The method of claim 1, wherein the survey niche of the information resource represents at least one identifiable portion of the information resource.

3. The method of claim 1, wherein a characterization of the at least one characterized partition differentiates the characterized partition from all other characterized partitions in the survey niche.

4. The method of claim 1, including defining the survey niche utilizing at least one operation selected from a group of operations including:
initializing the survey niche of the information resource utilizing the computing system; and
forming a new survey niche based on user actions.

5. The method of claim 1, including enabling presentation of at least a portion of at least one characterized partition to the user.

6. The method of claim 1, wherein results of the information survey are used to specify modification operations on the information resource surveyed.

7. The method of claim 5, including enabling selection of at least a portion of at least one characterized partition by the user.

8. The method of claim 1, including identifying a set of entities being associated with at least one characterized partition of the survey niche.

9. The method of claim 1, including:

transforming the survey niche by applying an operator selected from the group of operators including a crossover operator and a mutation operator; and
forming and representing a characterized partition as a species of entities belonging to the survey niche.

10. The method of claim 9, wherein the operator is further selected from a group of operators including a random operator, a non-random operator, and a partly random operator.

11. The method of claim 1, including:
transforming the survey niche by applying at least one of a semantic operator and a conceptual structure; and
forming and representing the at least one characterized partition of entities in the transformed survey niche as a concept.

12. The method of claim 1, including defining the survey niche by a predicate of any sort.

13. The method of claim 1, including associating a survey monitor with the survey niche.

14. The method of claim 12, wherein the predicate represents an item selected from a group including a trait, a coding sequence, and a semantically defined characteristic.

15. The method of claim 1, including forming and representing the at least one characterized partition of entities in the transformed survey niche as a survey lattice element.

16. The method of claim 15, wherein the forming and representing includes at least one operation selected from a group of operations including forming maximal satisfiable elements of the survey lattice, forming non-maximal satisfiable elements of the survey lattice, forming minimal unsatisfiable elements of the survey lattice, and forming non-minimal unsatisfiable elements of the survey lattice.

17. The method of claim 1, including transforming the survey niche according to at least one of a single transformation and a composite transformation.

18. The method of claim 1, including transforming the survey niche according to at least one of deterministic transformations, non-deterministic transformations, and a combination of partly deterministic and partly non-deterministic transformations.

19. The method of claim 1, including transforming the survey niche according to at least one of adding, deleting, negating, modifying, binding, and resolving predicates.

20. The method of claim 1, including transforming the survey niche by transforming the set of entities in the survey niche.

21. The method of claim 1, including transforming a predicate that is at least one of single valued, set valued, range valued, and of a complex type.

22. The method of claim 1, including transforming a predicate according to at least one operation selected from a group of semantic transformation operations including generalization/specialization, mereological transformation, relationship transformation, data type transformation, and action transformation.

23. The method of claim 1, including transforming a set of predicates such that the transformed set of predicates is not itself satisfiable.

24. The method of claim 1, including transforming a set of predicates to generate a number of maximal satisfiable survey lattice elements such that a number of maximal satisfiable survey lattice elements of the transformed survey lattice is bounded by an upper bound, a lower bound, or an upper bound and a lower bound.

25. The method of claim 1, including transforming a set of predicates to generate a number of minimal unsatisfiable survey lattice elements such that a number of minimal unsatisfiable survey lattice elements of the transformed survey lattice is bounded by an upper bound, a lower bound, or an upper bound and a lower bound.

26. The method of claim 1, including transforming a set of predicates such that the transformed set of predicates at least partly matches a set of predicates for which survey lattice elements are already formed.

27. The method of claim 1, including transforming the survey niche in order to achieve transformation goals from a group including a specific or general contraction, a specific or general expansion, and a specific or general shifting of the survey niche.

28. The method of claim 1, including transforming a set of predicates so as to achieve differentiation of partitions and entities.

29. A method to generate a survey lattice as a specialization of a predicate lattice.

30. The method of claim 29, including performing at least one operation on the survey lattice, in whole or in part, selected from the group of operations including representing the survey lattice, localizing the survey lattice, distributing the survey lattice, replicating the survey lattice, storing the survey lattice, retrieving the survey lattice, forming the survey lattice on-demand, using survey lattices singly or in plurality, indexing the survey lattice, presenting the survey lattice to the user, enabling the user to interact with the survey lattice, and enabling the user to communicate the survey lattice.

31. A method to form a predicate lattice, the method including:
identifying one or more facts for the satisfiability of each predicate;
grouping the one or more facts by point of evidence to generate one or more groups of facts;
sorting the one or more groups of facts by a number of predicates satisfied;
rejecting duplicate groups of facts from the one or more groups of facts; and
using group containment of the one or more groups of facts as a partial order of the lattice.

32. The method of claim 31 to form a maximal satisfiable element of a predicate lattice, the method including rejecting contained groups from the one or more groups of facts.

33. The method of claim 31 to form minimal unsatisfiable elements of a predicate lattice, the method including:
identifying one or more negative facts for unsatisfiability of each predicate;
grouping the one or more negative facts by point of evidence to generate one or more groups of negative facts;

sorting, in ascending order, the one or more groups of negative facts by a number of negative facts in a respective group;
rejecting groups of negative facts that contain a same subset of the set of predicates;
rejecting groups of negative facts for which another group is a subset from the one or more groups of negative facts; and
rejecting groups of negative facts that are subsets of maximal satisfiable predicate lattice elements.

34. The method of claim 31, wherein the forming of the predicate lattice, in whole or in part, includes performing at least one operation on a fact structure selected from a group of operations including generating, storing, applying, and maintaining fact structures.

35. The method of claim 34, wherein the fact structure includes at least one of a fact table and a fact index.

36. The method of claim 31, wherein the forming of the predicate lattice, in whole or in part, includes performing at least one operation on a bitmap index selected from a group of operations including generating, storing, applying, and maintaining bitmap indexes.

37. A method to represent predicate lattice elements, the method including:
putting predicates which are atoms of a predicate lattice into a strict order, using a computing system; and
associating a predicate lattice element with a predicate in the strict order using the computing system, where the associated predicate lattice element contains the predicate.

38. A method to augment an index by associating a predicate lattice element with an index entry, where the predicate lattice element contains the index entry.

39. A method to augment a conceptual structure by associating a predicate lattice element with a component of a conceptual structure, where the predicate lattice element contains the component of the conceptual structure.

40. A method to augment a category system by associating a predicate lattice element with a category of a category system, where the predicate lattice element contains the category of the category system.

41. A method to augment a database system by associating a predicate lattice element with an attribute of a database system, where the predicate lattice element contains the attribute of the database system.

42. A data structure wherein survey lattice elements are based on a source from a group of sources including an index, a conceptual structure, a database, and a category system.

43. A system of an information structure augmented with a predicate lattice element, wherein the information structure belongs to a group including an index, a conceptual structure, a database, and a category system.

44. A system to conduct an information survey, the system including:
an information resource manager to identify a plurality of information entities, the plurality of information entities being associated with the survey niche;
a survey niche manager to manage at least one generation of a survey niche;
a partition manager to identify at least one characterized partition associated with the survey niche; and
a transformation manager to manage transformation of the survey niche.

45. The system of claim 44, wherein the survey niche of the information resource represents at least one identifiable portion of the information resource.

46. The system of claim 44, wherein the system includes at least one manager selected from a group of managers including:
a survey manager to maintain survey configuration information and manage multiple survey generations;
a session manager to manage survey sessions and obtain services from other managers;
a predicate manager to manage terms, concepts, and predicates, and perform disambiguation;
a user manager to manage user information;
a persistence manager to store and retrieve information for other managers;
an integration manager to connect with external systems other than information resources; and
a user interface manager for creating and managing displays and handling user input.

47. The system of claim 44, wherein the partition manager is a survey lattice manager to generate survey lattice elements.

48. The system of claim 44, including a survey lattice manager to generate a survey lattice element.

49. A user interface to enable a user to survey an information resource, the user interface including:

a means for capturing user input to initialize a survey niche; and

a displaying means for presenting a plurality of characterized partitions to the user.

50. The user interface of claim 49, the user interface including at least one means selected from a group consisting of:

a means for capturing user input to modify the survey niche,

a means for user provision of predicates to initialize the survey niche,

a means for user provision of example entities to initialize the survey niche,

a means for triggering the transformation of the survey niche,

a means for enabling the user to make a selection from the plurality of characterized partitions,

a means for iterating to identify a new survey niche and its characterized partitions according to the user selection from the plurality of characterized partitions,

a means for presenting and providing user access to at least one entity from the information resource associated with the characterized partition,

a means for iterating to identify a new survey niche and its characterized partitions according to the user selection from the entities contained in the plurality of characterized partitions,

a means for providing support for user interaction for purposes of assessment of trade-offs between the characterized partitions from the plurality of characterized partitions, wherein the assessment of tradeoffs include comparing and contrasting of the characterized partitions from the plurality of characterized partitions,

a means for enabling the user to manage and persist the information survey,

a means for enabling the user to manage and persist the survey niche,

a means for managing and presenting a survey monitor to provide the user with additional information about the plurality of characterized partitions and their entities,

a means for managing a plurality of metadata modifiers for the plurality of survey niche predicates and survey monitors, and

a means for user control of transformation mechanisms used to transform the survey niche.

51. The user interface of claim 49, wherein the interface includes a means for presenting at least one survey lattice element.

52. The user interface of claim 49, wherein the interface includes a survey lattice table for presenting at least one survey lattice element.